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ABSTRACT

Virginia Tech has implemented an off-campus individualized instruction model for new, inservice, provisional certificate teachers. The program has incorporated several innovations to enhance the quality and efficiency of this approach, which has been practiced in various states for a number of years. The provisional certificate course series consists of five offerings taught over a two-year period: introduction to vocational and technical education, methods of teaching vocational subjects, laboratory management, curriculum development, and evaluation. Use of the conventional model Performance-Based Teacher Education modules is a basic program component. Specialized modules have been developed in the areas of methodology for teaching handicapped and disadvantaged students, planning a first-week management system, demonstrating an understanding of adolescent behavior, and demonstrating a knowledge of federal, state, and local policies. After the provisional certificate requirements have been completed, a teacher educator completes the competency program sheet, which indicates competence in seven areas mandated by the Virginia Department of Education. Some periodic group interaction is required. (A list of modules used and a competency program sheet are appended.) (YLB)

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# VIRGINIA TECH'S OFF CAMPUS PROVISIONAL CERTIFICATE VOCATIONAL EDUCATION PROGRAM

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# VIRGINIA TECH'S OFF-CAMPUS PROVISIONAL CERTIFICATE VOCATIONAL EDUCATION PROGRAM

## Perspective

Implementation of the Vocational Education Act of 1963 brought with it a need for training large numbers of new teachers to staff the large number of new secondary vocational education facilities which were being built in virtually all localities in the nation. Concurrently, with this boom, the Manpower Training and Development Act, Community College/Technical Institute Movement, Appalachian Regional Commission funding and a host of industry/government supported training programs added to the burgeoning need for basic non-degree vocational teacher training.

Teacher education institutions scurried to keep up with the demand for certification courses. State Departments of Education developed new and improved certification requirements for non-degreed occupational teachers. In the Trade and Industrial Education area most new teachers emerged directly from industry without the typical four-year collegiate preparation required for other vocational fields. Subsequently the in-service off-campus course approach became popular. Teacher educators experienced little difficulty in filling in-service classes when held in urban areas. In rural areas, participation from two or three school districts/ counties was usually sufficient to operate one or two

courses annually.

## Change Patterns

In recent years, we have witnessed a number of factors which have altered the feasibility of continuing the conventional method of in-service course delivery started in the sixties. Although the mode of transition varied somewhat at the various local and state levels, certain basic change patterns have occurred nationally over the past decade.

1. As new teachers completed their initial provisional certification programs (typically anywhere from 9 to 24 sem. credits), fewer credits were generally required for re-certification. Furthermore, after completing the basic required vocational teacher preparation courses, less prescribed re-certification work was required in vocational education pedagogy. Hence, many non-degree teachers recertified by enrolling in general courses such as English, social studies and mathematics. Many continued their education by enrolling in A.S. or B.S. degree programs after their initial vocational education requirements were fulfilled.
2. Following the tremendous serge of program expansion in the late sixties and early

seventies, an inevitable decline in growth occurred. Reductions in federal and state support resulted in a gradual decline in the number of programs initiated, and hence in the number of new non-degree vocational education teachers enrolled in vocational education provisional certification courses. 3

3. Typically, non-degreed teachers are hired from the local community, hence most prefer to remain in the geographic area where they have established roots. Furthermore, although the teaching profession has its pitfalls; in a declining economy, it does offer a career which is more secure than could be gained by seeking to re-enter the uncertainties of the business/industrial world. Also it is significant to observe that there is less opportunity for upward mobility among non-degreed teachers. Degree teachers possess the qualifications which enable them to move upwards within the field of education. This door is closed, however, to non-degree teachers, hence they tend to remain at the same level, over longer periods of time It follows that teachers who have been

employed in the same capacity for a period of years have generally completed all the essential courses in pedagogy. 4

4. Teachers who have been away from the real world of work for a number of years typically fall behind in revising their curricula to include the current state of the art. Updating, as a requirement for recertification has been largely neglected by State Departments of Education. In areas where occupational updating is required for certification it is primarily a non-collegiate requirement. This crucial area where vocational teacher educators could have assumed a major role, following the teacher's completion of the basic provisional certification period, has been hindered by lack of state support.

For the aforementioned reasons undergraduate in-service class enrollments have dwindled considerably during recent years. In order to operate within reasonable fiscal guidelines, many universities began (1) requiring a minimal enrollment (2) cutting back on the number of certification classes offered, and (3) enlarging the geographic areas to be served by in-service classes. As classes became fewer and more spread out geographically, the increased amount of travel time

for teachers, especially in rural areas, caused the original mode of the in-service provisional certificate delivery system to become impractical.

We have now reached the point where the large majority of non-degree vocational education teachers have completed the basic pedagogical courses and seek to keep their certification in force through enrolling in non-vocational courses at local community colleges or other nearby institutions. Fewer new teachers are being hired.

Resultant of this scenario has been a gradual decline in the number of non-degree provisional certificate teachers who required the specialized services of in-service vocational education teacher educators. Regular size classes are no longer possible or feasible. Nevertheless the need still exists to offer the basic professional education courses to this group.

## Implementation of a System

Rather than require on-campus summer or after-school attendance, Virginia Tech has implemented the off-campus individualized instruction model for new in-service, Provisional Certificate teachers. This approach has been practiced in various states for a number of years, however the Virginia Tech program has incorporated several innovations which enhance the quality and efficiency of the individualized in-service approach.

The Provisional Certificate course series consists of five offerings, (1) Introduction to Vocational and Technical Education, (2) Methods of Teaching Vocational Subjects, (3) Laboratory Management, (4) Curriculum Development in Vocational and Technical Education, and (5) Evaluation in Vocational and Technical Education. State Certification regulations allow a non-degree teacher who has completed the aforementioned courses during a two year provisional period to be awarded a Vocational Education Certificate (VEC). Non-degree teachers who have completed the aforementioned series are permitted to teach in the areas of Trade and Industrial Education, Agricultural Machinery Services, Agricultural Processing and Marketing, Horticulture, Business, Data Processing, Hotel-Motel Operations, Food Service Marketing, Financial Service Marketing, Home Service Marketing and Occupational Home Economics.

The series is taught over a two-year period is as follows:

| | | |
|---|---|---|
| 1st. year | Fall Quarter. | Introduction to Vocational and Technical Education (off-campus) |
| | Winter Quarter. | Methods of Teaching Vocational Subjects (off-campus) |
| | Spring Quarter. | Laboratory Management (off-campus) |
| | Summer Quarter. | Catch up on above (on-campus only) |
| 2nd year | Fall Quarter. | Curriculum Development in Vocational and Technical Education (off-campus) |

Winter Quarter. Evaluation in Vocational and Technical Education (off-campus)
Spring Quarter. Individual catch-up (off-campus)
Summer Quarter. Catch up (on campus)

Utilization of the conventional model Performance Based Teacher Education (PBTE) modules (AAVIM, 1978) is a basic program component.(Fig. 1).

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Insert Fig. 1 here

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There are, however, certain competencies which are critical to the needs of new teachers which are not addressed in the PBTE modules. Hence, specialized modules and/or assignments were developed in the areas of (1) methodology for teaching handicapped and disadvantaged students (2) planning a first week management system (3) demonstrating an understanding of adolescent behavior, and (4) demonstrating a knowledge of federal, state and local policies.

The Virginia Department of Education has mandated seven required areas of provisional teacher certification. These are as follows:

1. Organization. Competence in preparing and presenting an instructional plan.
2. Evaluation. Competence in selection, development, and utilization of tests and test scores.

3. Recognition of Individual Differences. Competence in the recognition of student exceptionalities, including gifted and talented students and those with handicaps.

4. Cultural Awareness. Competence in the recognition of cultural influences on individual students, on the school as a whole, and on school-community relations.

5. Understanding the Nature of Youth. Competence in understanding various patterns of human growth and development as they relate to student learning and achievement.

6. Management. Competence in classroom management and discipline.

7. Educational Policies and Procedures. Competence in understanding and implementing appropriate federal state and local policies affecting education.

A complete list of competencies to be achieved in each of the aforementioned categories was prepared in the form of a check sheet listing thirty-one basic competencies. An example of competencies required for Area 1." Organization" of the Competency Program Sheet is shown in Fig. 2.

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Insert Fig. 2 here

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After the Provisional Certificate requirements have been completed, the assigned teacher educator completes the Competency Program Sheet and submits it to the State Department of Education. Transcripts verify the college credit accrued while enrolled in the Provisional Certificate Endorsement program. Teachers receive

copies of the Competency Program Sheet so they can keep a record of their own personal progress.

Inasmuch as the PBTE modules are quite broad in nature, having a general relevance to all vocational fields, course syllabi are written which require specialized work of a practical nature which supplements module completion. This work can be adjusted by the teacher educator to fit the needs of the endorsement area. In all cases the additional work is something which can actually be utilized in the classroom or laboratory by the new teacher, i.e., units of instruction, tests, laboratory management systems, safety programs, etc. In most cases the work done toward completion of the modules can be utilized as part of the supplementary project, previously described. One example of a supplementary product which is concomitant with module activities is shown in Figure 3. A similar type of supplementary project is tied in with each of the five offerings.

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Insert Figure 3

---

Considering the general nature of the PBTE modules, vocational teacher educators work with teachers on a bi-weekly basis. When there are several teachers within a geographic area (generally up to 1-1/2 hrs. driving time), the group meets at a central location periodically.

Some group interaction is important in all courses, especially in the methods area, where videotaped practice presentations are utilized.

Once during the two year period of the provisional certification an "open quarter" is scheduled to allow teachers who missed a course, started teaching in mid-year, or for other reasons may be behind on credits. Courses are also scheduled on campus during the summer for those who wish to travel to campus for two week short courses.

## CONCLUSION

The system has been operational for two years and it appears to be a viable alternative to the traditional off-campus delivery system. A follow-up study of the first group to complete the series has provided valuable input into future plans to revise and update the program. Some major conclusions reached are:

1. The major key to successful operation is the personal contact which the teacher educator has with teachers.
2. Because of the general nature of the modules, a great deal of supplementary information and activities must be provided in order to make the learning experiences applicable to a particular program. For example, management methodology in a brick-masonry laboratory is vastly different

from such methodology in an electronics laboratory. Hence the required supplementary products as illustrated in Fig. 3 are extremely important. 11

3. "Over the Shoulder" assistance and mini-class involvement must be coordinated with module activities.
4. Activities such as course of study development, safety program development, etc. are too large to complete in their entirety during the time provided for the initial endorsement. Teacher educators should follow-through on the work done in the initial module series.

# REFERENCES

American Association for Vocational Instructional Materials, Performance Based Teacher Education Modules, Athens, GA. University of Georgia, 1979.

FIGURE 1

PBTE MODULES UTILIZED WITH THE INSERVICE PROVISIONAL CERTIFICATE SERIES

PBTE Modules

| | |
|---|---|
| Mod. B-1 | Determine Needs and Interests of Students |
| Mod. B-2 | Develop Student Performance Objectives |
| Mod. B-3 | Develop a Unit of Instruction |
| Mod. B-4 | Develop a Lesson Plan |
| Mod. B-5 | Select Student Instructional Materials |
| Mod. B-6 | Prepare Teacher-Made Instructional Materials |
| Mod. C-15 | Present an Illustrated Talk |
| Mod. C-16 | Demonstrate a Manipulative Skill |
| Mod. C-2 | Conduct Group Discussions, Panel Discussions and Symposiums |
| Mod. C-12 | Employ Oral Questioning Techniques |
| Mod. C-18 | Individualize Instruction |
| Mod. C-7 | Direct Student Laboratory Experience |
| Mod. C-6 | Guide Student Study |
| Mod. C-24 | Present Information with Filmstrips and Slides |
| Mod. C-25 | Present Information with Films |
| Mod. C-23 | Present Information with Overhead and Opaque Materials |
| Mod. D-1 | Establish Student Performance Criteria |
| Mod. D-2 | Assess Student Performance: Knowledge |
| Mod. D-3 | Assess Student Performance: Attitudes |
| Mod. D-4 | Assess Student Attitudes: Skills |
| Mod. D-5 | Determine Student Grades |
| Mod. D-6 | Evaluate Your Instructional Effectiveness |
| Mod. E-1 | Project Instructional Resource Needs |
| Mod. E-2 | Manage Your Budgeting and Reporting Activities |
| Mod. E-4 | Maintain A Filing System |
| Mod. E-5 | Provide for Student Safety |
| Mod. E-6 | Provide for First Aid Needs of Students |
| Mod. E-7 | Assist Students in Achieving Self-Discipline |
| Mod. E-9 | Manage the Vocational Laboratory |
| Mod. G-1 | Develop A School Community Relations Program for Your Vocational Program |
| Mod. G-3 | Develop Brochures to Promote Your Vocational Program |
| Mod. G-5 | Prepare News Releases & Articles Concerning Your Vocational Program |
| Mod. G-7 | Conduct an Open House |

Other Modules/Activities

Demonstrate Your Understanding of Adolescent Growth & Development
Plan a First Week Class Management System
Demonstrate your Knowledge of Federal, State and Local Policies
Organize and Execute a Plan for Accomodating Handicapped or Disadvantaged Students

FIGURE 2

PROVISIONAL CERTIFICATE
COMPETENCY PROGRAM SHEET

Teacher's Name: _____ School: _____

Area Teaching: _____ Address: _____

| COMPETENCIES | KNOW | TO LEARN | RATING | DATE | SIGNATURE | COMMENTS |
|---|---|---|---|---|---|---|
| ORGANIZATION--COMPETENCIES IN PREPARING AND PRESENTING AN INSTRUCTIONAL PLAN: | | | | | | |
| Develop instruction plans for a unit of study. | | | | | | |
| Select and obtain appropriate instructional resources and supplies for a unit of learning. | | | | | | |
| Plan and develop a curriculum for your trade area. | | | | | | |
| Demonstrate a manipulative skill in an actual laboratory situation. | | | | | | |
| Present an illustrated talk in an actual classroom situation. | | | | | | |
| Conduct a group discussion, panel discussion, and symposium in an actual teaching situation. | | | | | | |
| Guide student study in an actual teaching situation. | | | | | | |
| Conduct a presentation in an actual school situation, using films, filmstrips, and slides. | | | | | | |

FIGURE 2 CONTINUED

| COMPETENCIES | KNOW | TO LEARN | RATING | DATE | SIGNATURE | COMMENTS |
|---|---|---|---|---|---|---|
| Conduct a presentation using overhead projection equipment & instructional materials. | | | | | | |
| EVALUATION OF STUDENT PERFORMANCE--COMPETENCE IN THE SELECTION, DEVELOPMENT, AND UTILIZATION OF TESTS AND TEST SCORES. | | | | | | |
| Develop performance tests for the psychomotor terminal objectives of one unit of learning. | | | | | | |
| Develop and use written tests to evaluate the achievement of the cognitive and affective objectives of a unit of learning. | | | | | | |
| Develop and use student evaluation record system for a unit of learning.<br>Use available testing materials to evaluate students. | | | | | | |
| RECOGNITION OF INDIVIDUAL DIFFERENCES--COMPETENCE IN THE RECOGNITION OF STUDENT EXCEPTIONALITIES, INCLUDING THE GIFTED AND TALENTED STUDENTS AND THOSE WITH HANDICAPS. | | | | | | |
| Evalute tests and testing materials to determine appropriateness and usefulness to specified purposes. | | | | | | |
| Provide individualized instruction in an actual classroom/laboratory situation. | | | | | | |
| Plan and direct student laboratory experience in an actual laboratory situation. | | | | | | |

FIGURE 2 CONTINUED

| COMPETENCIES | KNOW | TO LEARN | RATING | DATE | SIGNATURE | COMMENTS |
|---|---|---|---|---|---|---|
| Organize and execute a plan for accomodating handicapped or disadvantaged students in an actual classroom/laboratory situation. | | | | | | |
| CULTURAL AWARENESS--COMPETENCE IN THE RECOGNITION OF CULTURAL INFLUENCES ON INDIVIDUAL STUDENTS, ON THE SCHOOL AS A WHOLE, AND ON SCHOOL/COMMUNITY RELATIONS: | | | | | | |
| Develop a school-community relations plan for your local program with provided instructional materials. | | | | | | |
| Conduct a presentation to promote a school-community relations program using provided instructional materials. | | | | | | |
| Prepare news releases and articles concerning your vocational program using provided instructional materials and actual school-community situations. | | | | | | |
| Plan and conduct an openhouse to promote your vocational program using instructional materials and local facilities. | | | | | | |

FIGURE 2 CONTINUED

| COMPETENCIES | KNOW | TO LEARN | RATING | DATE | SIGNATURE | COMMENTS |
|---|---|---|---|---|---|---|
| Coordinate work activities with members of a community using provided instructional materials and an actual school-community situation. | | | | | | |
| UNDERSTANDING OF THE NATURE OF YOUTH--COMPETENCE IN UNDERSTANDING THE VARIOUS PATTERNS OF HUMAN GROWTH AND DEVELOPMENT AS THEY RELATE TO STUDENT LEARNING AND ACHIEVEMENT: | | | | | | |
| Demonstrate your understanding of adolescent growth and development as related to student learning and achievement by answering correctly 85% of the items on a paper and pencil test. | | | | | | |
| MANAGEMENT -- COMPETENCE IN CLASSROOM MANAGEMENT AND DISCIPLINE: | | | | | | |
| Plan a first week class management system based upon a stated actual teaching situation. | | | | | | |
| Project and order a one year supply of resource needs from a list of stated instructional goals. | | | | | | |

FIGURE 2 CONTINUED

| COMPETENCIES | KNOW | TO LEARN | RATING | DATE | SIGNATURE | COMMENTS |
|---|---|---|---|---|---|---|
| Manage budgeting and reporting responsibilities in the areas of travel, purchasing, gift acceptance, and student fees in a selected vocational program based upon stated directions from the principal. | | | | | | |
| Plan and maintain a filing records system in a stated school situation. | | | | | | |
| Plan and execute a management system in a selected vocational classroom and laboratory. | | | | | | |
| Plan and execute a student personnel organization in an actual classroom or laboratory situation. | | | | | | |
| Develop a plan for dealing with five student discipline situations in the form of case studies. | | | | | | |
| Plan and execute a student safety program in an actual classroom/ laboratory environment. Plan a first aid program in a classroom/ laboratory environment. | | | | | | |

FIGURE 2 CONTINUED

| COMPETENCIES | KNOW | TO LEARN | RATING | DATE | SIGNATURE | COMMENTS |
|---|---|---|---|---|---|---|
| EDUCATIONAL POLICIES AND PROCEDURES--COMPETENCE IN UNDERSTANDING AND IMPLEMENTING APPROPRIATE FEDERAL, STATE, AND LOCAL POLICIES AFFECTING EDUCATION. | | | | | | |
| Demonstrate your knowledge of federal, state, and local policies by answering correctly 85% of the items on a paper and pencil test. | | | | | | |

The following individuals certify that_____ has completed all competencies needed to meet the certification standards of the Provisional Certificate.

_____
Teacher

_____
Teacher Educator

_____
Principal

FIGURE 3

SUPPLEMENTARY PRODUCT FOR A LABORATORY MANAGEMENT COURSE

Using the Laboratory Management Module Series, selected references and personal materials, develop a laboratory management guidebook according to the following guidelines:

1. Introduction Page:
   A. Purpose of booklet.
   B. Type of laboratory, grade level, purpose of the course.
2. Table of Contents

3. First week management procedures:
   A. Listing of things to take care of during first week of class.
   B. Student Background Data form.
   C. Plan for handling handicapped and disadvantaged students.
   D. Shop rules.
   E. General safety rules.
   F. Record sheet for:
      (a) Locker number and combination
      (b) Books issued
      (c) Safety glasses
      (d) Tool kits issued
      (e) Home school
   G. Letter to parents concerning:
      (a) Expenses
      (b) Insurance
      (c) Clothing required
   H. Student interest sheet
   I. Work release and/or live work agreement
   J. Student code of conduct and attendance
4. Equipment and supply selection
   A. Specifications for all major equipment in your laboratory.
   B. Specifications for at least twelve small tools or instruments.
   C. A standard consumable supply order form which can be used repeatedly. This should contain (1) standard unit, (2) description, (3) suggested supplies, and (4) price
5. Tool storage and control
   A. Description of tool storage and control system in your shop.
   B. A copy of your updated shop inventory.
   C. System of calculating depreciation of equipment.
6. Maintenance
   A. Maintenance schedule and record for all major equipment.
   B. Maintenance instruction sheet for students (one sample)
   C. List of consumable spare parts, special lubricants, etc. for major equipment
7. Laboratory records: Select six from the following:
   A. Attendance management system.
   B. Student evaluation form.
   C. Job records.
   D. Safety management system.
   E. Progress charts (class and individual).
   F. Demonstration schedule.
   G. Job rotation system.
   H. Innovative lab management ideas.

8. Personnel organization
   A. Rotating personnel organization for duties such as clean up, tool control, supply control, area responsibility, other, etc.
   B. Describe your safety committee organization.
9. Discipline:
   A. Written description of standards of behavior and systems for maintaining discipline in your laboratory and/or classroom.
   B. A written description of school district policy for handling serious discipline problems.
10. Budget:
   A. Format for making a budget request.
   B. System for keeping an accounting of expenditures and debits.
11. Personal Evaluation of your management system (standardized form).